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Warning

- This manual is an important part of the product. Please read and understand it thoroughly.
- Keep the manual for future use in inspection and maintenance.
- Do not use the product for any other purposes.
- The manufacturer is not responsible for any damage caused by improper use or uses other than the designed purpose.

Precaution

- Only well-trained personnel can operate the lift. Any unauthorized modifications to the machine components without the permission from the manufacturer or without complying with this instruction manual may cause direct or indirect damages to the machine
- Do not expose the lift to extreme temperature or humidity. Keep it away from heating device, faucet, humidifier or furnace
- Keep the lift away from the dust, ammonia, alcohol, thinner and spray adhesive.
- Keep away from the lift when it is in operation.
- Inspection of the lift should be carried out regularly. Do not operate a damaged lift or a lift with broken parts. All the parts are only replaceable with the parts provided by the manufacturer.
- Do not overload the lift. The maximum lifting weight is clearly marked on the nameplate.
- Do not operate the lift when there are personnel in the vehicle.
- Keep the lifting area clear of obstacle, grease, oil, garbage and other substances.
- Use the lifting point recommended by the auto manufacturer. Keep the support in close contact with the vehicle.
- Use appropriate tools and safety protection equipments such as overall and working boots.
- Pay special attention to the safety labels on the control desk.
- Keep hands and other body parts away from the moving parts of a lift in operation.
- Do not remove or override safety protection of the lift.
- Hydraulic oil for the lift is N32 or N46 mechanical oil. Pay attention to the safe data as described in this manual.
- For the sake of technical improvements, Launch (Shanghai) Machinery Co., Ltd reserves the right to change the specifications without prior notice.

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1 General Information

1.1 Applications

This lift is designed for the purpose of lifting light vehicles under 3.0 tons for vehicle test, service, four-wheel alignment, maintenance or cleaning.

1.2 Features

- Double scissors lift, with the front wheel turntable positions, rear wheel side sliding plate and scissor type secondary lifting, which is suitable for the four-wheel alignment.
- Meet the requirements of the garage, workshop and tire dealer by adopting the design based on international standard, and elegant in appearance.
- Surface installation or ditch installation to save working space.
- Hydraulic system keeps both platforms at level position.
- Total travel mechanical safety device with pneumatic control can help the operation easy, safe and reliable.
- Height limit switch can prevent the machine from damage.
- All the moving parts use the maintain-free bearings to guarantee the long time performance.

1.3 Specifications

Lifting height mm(″)	Rated capacity kg(lb)	Lifting time s	Lowering time s	Motor kw	layer	Size of platform mm(″)	Weight kg(lb)	Synchro mm(″)	Levelness mm(″)
Small scissor 450(17.7)	3000 (6614)	≤30	≥12	2.2	2	1400×550 (55.1X21.7)	2050 (4519)	≤40 (1.6)	≤5 (0.2)
Big scissor 1900(74.8)	3000 (6614)	≤50	≥20			4000×550 (157.5X21.7)			

Electrical Parameters：

Motor (optional)：2.2kw 1450 r/min

Single/Three phase: 110v/200v 60Hz

Single/Three phase: 220v/380v 50Hz

Noise

Working noise: ≤ 80dB（A）

Hydraulic Equipment

Max. Working Pressure: 30 MPa, Flow rate: 5-6L/min.

Pneumatic Equipment

Working pressure：5 kgf/cm^2

1.4 Environment requirement

Temperature: 0℃ ~ +40℃

Relative Humidity: ≤80% at 30℃

Transportation/Storage Temperature: -25℃～+55℃

Altitude: ≤2000m(78740")

2 Structure of the lift

2.1 Structure

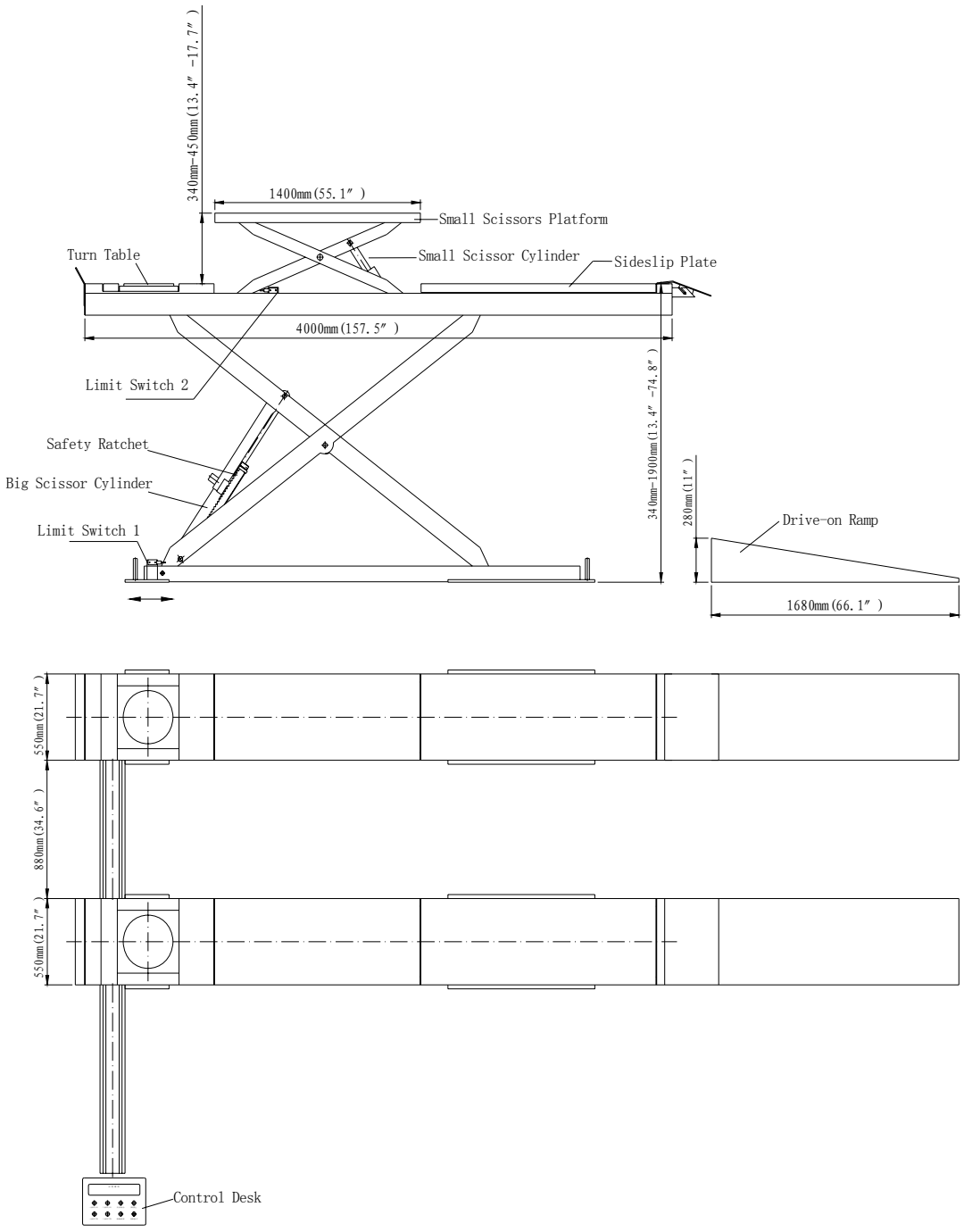


Fig.1

2.2 Electrical Schematic Diagram

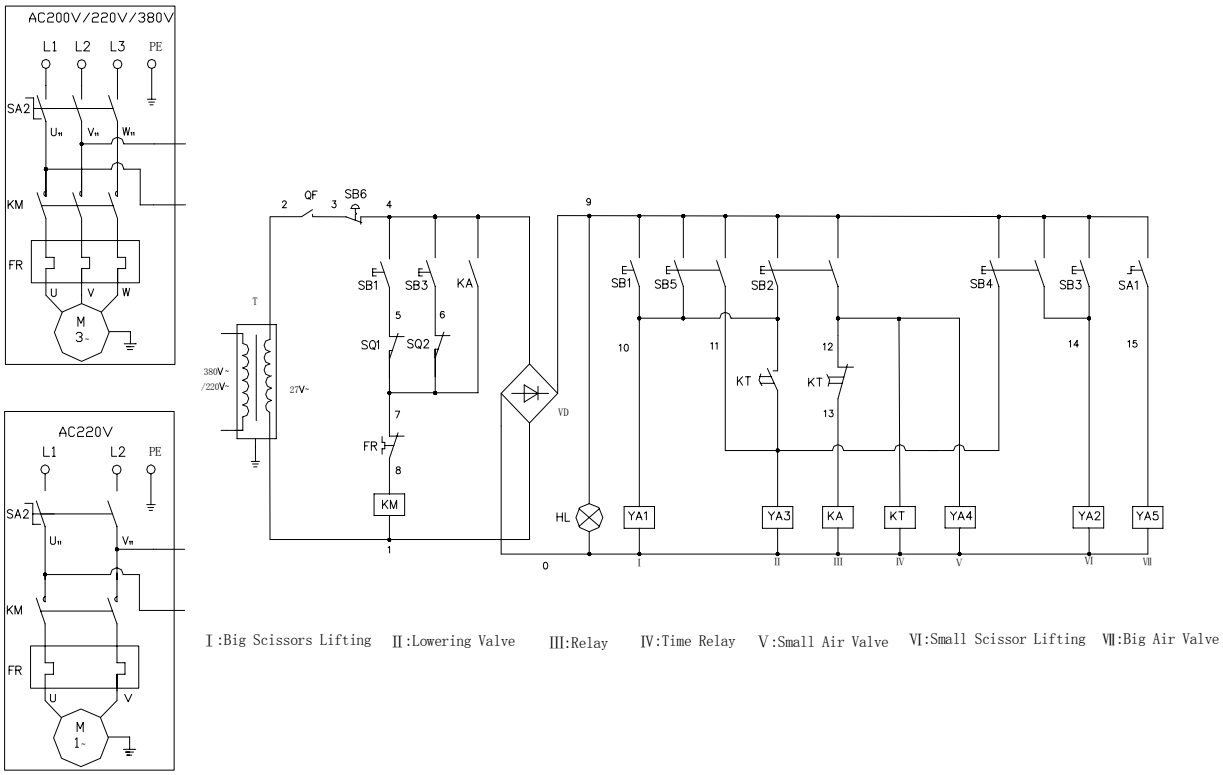
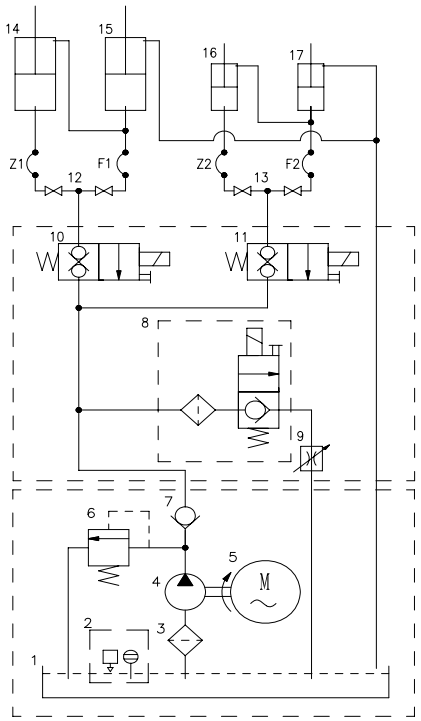


Fig.2

2.3 Hydraulic Diagram



F2、Small Scissors Slave Cylinder Oil Hose
F1、Big Scissors Slave Cylinder Oil Hose
Z2、Small Scissor Master Cylinder Oil Hose
Z1、Big Scissors Master Cylinder Oil Hose
17、Small Scissor Slave Cylinder
16、Small Scissor Master Cylinder
15、Big Scissor Slave Cylinder
14、Big Scissor Master Cylinder
13、High Pressure Stop Valve
12、High Pressure Stop Valve
11、Solenoid Valve/Manual Control
10、Solenoid Valve/Manual Control
9、Lowering Speed Control Valve
8、Lowering Solenoid Valve/Manual Control
7、Check Valve
6、Relief Valve
5、Motor
4、Gear Pump
3、Filter
2、Oil Gauge/Air Blowhole
1、Oil Tank

Fig.3

2.4 Pneumatic Diagram

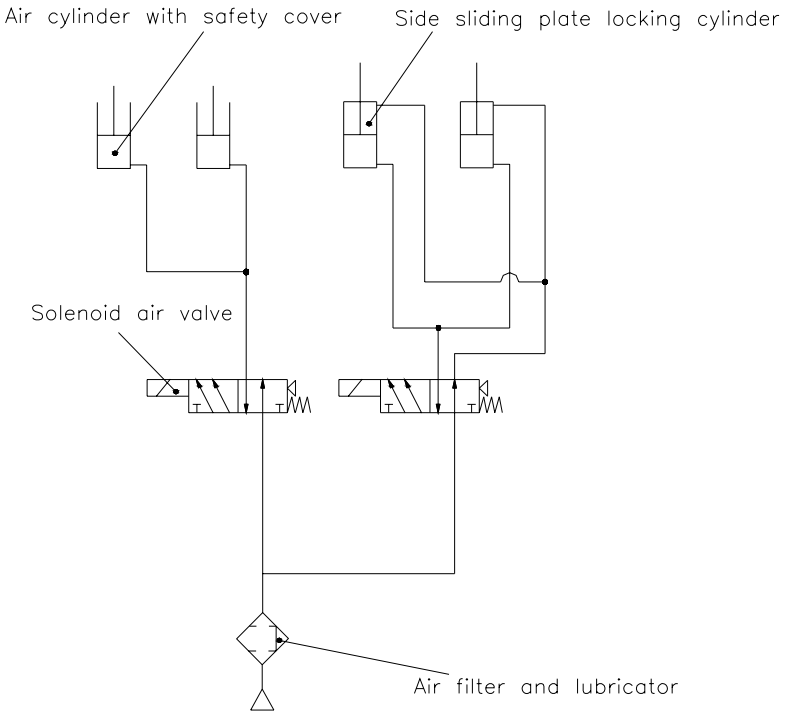


Fig.4

3 Operating Instruction

3.1 Operational Panel

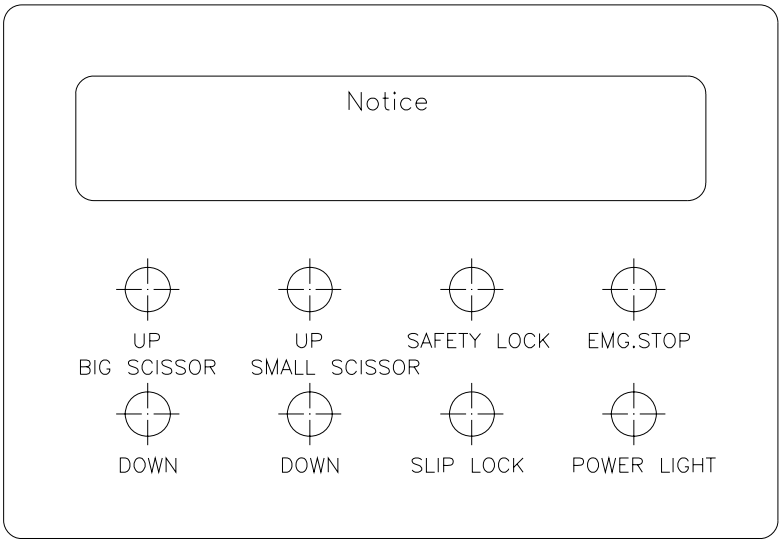


Fig.5

3.2 Check before Working

- Check if the big scissor platforms can work simultaneously and smoothly.
- Check if the safety ratchet cover works properly and smoothly.
- Check if the lift will stop rise automatically when the platforms rises to the height of 1900mm (74.8").
- Check if the two small scissor tables can work simultaneously and smoothly.
- Check if the machine will stop rise automatically when the small scissor tables rises to the height of 450mm (17.7").
- Check if there is oil leaking in the oil cylinders, oil hoses and fittings.
- Check if there is air leaking in the solenoid valve, air cylinders, pressure adjustment valves, and fittings.
- Check if the performance and sound of the motor and gear pump are normal.
- Check if the side sliding plate works normally.
- Check if the emergency stop button works normally.
- Check if each part of the lift works properly.

3.3 Operating Procedure

- When the vehicle driving on the lift, the speed should be under 5km/h, and make sure that the side sliding plate of the lift is in the locking state.
- When the vehicle stops, the front wheels should locate on the center of the turntable plate, and pull the manual brake.
- Press the big scissor UP button to raise the vehicle 20cm～30cm(7.9"～11.8") above the floor.
- Check if the levelness of vehicle and lift is normal.
- Keep pressing the UP button, and raise the vehicle to a proper height.
- Press the SAFETY LOCK button to lower the platforms. The safety ratchets of both sides will be engaged to ensure the safety for car servicing.
- If tire changing or wheel alignment is need, press small scissor UP button.
- After servicing the vehicle, keep the work area clear and safe before lowering lift.

3.4 Cautions for Operation

- The hydraulic relief valves are well-adjusted before leaving factory. The manufacturer will not be responsible for any damage caused by unauthorized adjustment.
- People are forbidden under the vehicle when lifting the vehicle.
- Check the safety lock ratchets are engaged before servicing the vehicle.
- Select the suitable supporting pads on the small scissor tables. The space between the supporting pads should be wide enough when positioning to obtain the largest supporting area.
- When the hydraulic hoses are leaking because of the damages, the leaking parts should be replaced in time, and then add the oil to the required oil level.
- Once the safety ratchets are fully engaged, the LOCK button should be released immediately. If the Lock button is pressed for too long， too much oil would flow back from cylinder. In this case, the safety ratchets can not be completely released from locked position within the set time for the platforms to go up when the DOWN button is pressed. This can result in no lowering action, or lowering of only one platform, which may cause the vehicle to fall from the lift.

4 Troubleshooting

Symptoms	Reasons	Solutions
The motor does not work.	Thermo relay or circuit breaker actuated Voltage is not correct. Electrical wiring is wrong. Motor is broken.	Reset the thermo relay or circuit breaker Supply power of correct voltage. Fix the wiring. Change motor.
The motor works, but the platforms do not move, or can only go up slowly.	The motor rotates in the wrong direction. Oil level is too low. Height limit switch is stuck or damaged.	Exchange wiring of motor to change direction. Add oil. Repair or replace the height limit switch.
The motor works, but the platforms can not lift the vehicle.	The voltage to the motor is too low. Pressure of relief valve is not right. The lift is overloaded The hydraulic pump is damaged.	Supply motor with correct voltage. Adjust the pressure of relief valve. Check the weight of the vehicle. Replace the hydraulic pump.
The lift is too slow in lowering.	There is foreign substance in the lowering solenoid valve. Lowering speed valve is turned too low.	Clean the lowering solenoid valve. Turn the lowering speed valve up.
The platforms are not synchronized.	There is air in upper chamber of Master Cylinder or Slave Cylinder. The oil supply can not be cut off because of the leakage of stop valve. Leakage in hydraulic system	Air bleeding performance is needed. The air in the master and slave cylinder can be bled after the platform goes up and down several times. Replace stop valve. Replace the seal or the cylinder.
Safety ratchets cannot be separated from serration.	The air pressure regulating valve is closed or too low. The Solenoid air valve is damaged. The LOCK button is pressed for too long time.	Adjust air pressure to 5kg/cm^2 Replace the solenoid air valve. Release the LOCK button immediately after the safety ratchets are fully engaged.

5 Maintenance

5.1 Daily

- Keep the lift clean. Make sure power is cut off before cleaning the lift.
- Keep the working area clean. Excessive dust in the work area will shorten the lifespan of the lift.
- Before operation, inspect and keep all the safety devices of lift in order. If any problems are found, adjust, maintain or replace the parts timely.
- Make sure that the pits are kept dry and clean.
- Inspect if there is leakage in the air valve and if it is well-lubricated.

5.2 Monthly

- Refasten the anchor bolts.
- Check all the hoses and fittings for possible wearing and leakage. If any leakage is found to be caused by worn sealing parts, replace with parts meeting the specifications.
- Check if the roller slide is well-lubricated with high-quality #2 lithium lubricant.
- Apply #2 lithium lubricant on a monthly basis

5.3 Every Six Month

- Check all the moving parts for possible wearing, interference and damage.
- Inspect the lubrication of all the rollers. If the roller is dragged along in lifting or lowering, apply lubricant to the roller shaft.
- At the end of the first six months, clean the hydraulic system and replace the hydraulic oil. Replace the hydraulic oil with N32 hydraulic oil in winter and N46 in summer.

6 Storage and Scrapping

6.1 Storage

When the lift needs to be stored for a long time:

- Unplug from power socket.
- Lubricate all the parts, including all the contact surface of the rollers.
- Bleed oil from tanks.
- Cover the lift with plastic hood.

6.2 Scrapping

When the lift has exceeded its lifespan and can not be used any more, disconnect it from the electrical supply and dispose of as required by the local regulations.

Data of Grease and Oil

2# lithium lubricating grease

Item	quality index
cone penetration（1/10mm）	278
drop point℃	185
corrode（T2 sheet copper，100 ℃，24h）	No change in sheet copper
Oil leaking in copper grid（100℃，22h）%	4
evaporation capacity（100℃，22h）%	2
oxidation stability（99℃，100 h）	0.2
preventing corrosion（52℃，48）	1 级
impurity（microscopic method）/（piece/cm³） Above 10μm not more than Above 25μm not more than Above 75μm not more than Above 125μm not more than	 5000 3000 500 0
Resembling viscosity （-15℃，10s^{-1} ），/(Pa·s) not more than	800
Water losing（38℃，1h）(%) not more than	8

N32mechanical oil （for use in winter）

Item	quality index
Moving viscosity 40℃	28.8～35
pour point /℃ not higher than	-15
flashing point /℃ not lower than	175

N46 mechanical oil（for use in summer）

Item	quality index
Moving viscosity 40℃	41.4～50.6
pour point /℃ not higher than	-9
flashing point /℃ not lower than	185

TLT830WA Wear Parts

NO	CODE	NAME & SPEC	USE FOR	QTY
1	GB1235-76	O-ring 105x3.1	Big scissor master cylinder	2
2	GB1235-76	O-ring 35x3.1	Big scissor master and slave cylinder Small scissor master and slave cylinder	2
3	GB1235-76	O-ring 95x5.7	Big scissor slave cylinder	1
4	GB10708.3-89	Dust proof ring FC45x53x5	Big scissor master and slave cylinder	1
5	S55044	Seal ring 105x89.5x6.3	Big scissor master cylinder	1
6	S55044	Seal ring 95x79.5x6	Big scissor slave cylinder	1
7	S55013	Seal ring GS45x60.5x6	Big scissor master cylinder	1
8	GB10708.1-89	Shaft sealing ring GY45x55x7	Big scissor master cylinder	1
9	GB1235-76	O-ring 90x3.1	Small scissor master cylinder	2
10	GB1235-76	O-ring 75x5.7	Small scissor slave cylinder	1
11	GB10708.3-89	Dust proof ring FC50x58x5	Small scissor master and slave cylinder	1
12	S55044	Seal ring 90x74.5x6.3	Small scissor master cylinder	1
13	S55044	Seal ring 75x64x4	Small scissor slave cylinder	1
14	GB10708.1-89	Shaft sealing ring GY50x60x7	Small scissor master cylinder	1
15	S55013	Seal ring GS50x65x6	Small scissor master cylinder	1
16	103040157	Seal gasket 14		5
17	103040158	Seal gasket 16		5
18	104130182	Z8 Seal	Air cylinder	2
19	102990070	Air connector APL6-01		2
20	102990071	Air connector APL6-02		2
21	102160380	T air connector APE6		2